BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA



Order Instituting Rulemaking Regarding Building Decarbonization.

Rulemaking 19-01-011 (Filed on January 31, 2019)

REPLY COMMENTS OF SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) ON ORDER INSTITUTING RULEMAKING REGARDING BUILDING DECARBONIZATION

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Pursuant to the Order Instituting Rulemaking Regarding Building Decarbonization filed by the California Public Utilities Commission (Commission), Southern California Gas Company (SoCalGas) hereby submits its reply comments on the Order Instituting Rulemaking (OIR).

I. INTRODUCTION AND SUMMARY OF KEY COMMENTS

SoCalGas supports a building decarbonization strategy that allows the State to maintain a diverse portfolio of energy options. Californians currently rely on a balanced energy system that is reliable, resilient, and strives to remain affordable while providing consumer choice.

SoCalGas encourages the Commission and parties to support an integrated and holistic approach to reducing greenhouse gas (GHG) emissions in the building sector to promote and sustain these values currently embodied in California's energy portfolio. While it may be easy to fixate on a one-track approach, such as electrifying end uses, California should support an inclusive energy strategy that objectively considers all options and encourages current and future innovation to achieve and sustain GHG emissions reductions in the long run. Building decarbonization solutions should be practical in terms of cost and adoption to effectuate consumer acceptance, and furthermore create a framework that is scalable and exportable.

II. BALANCED AND CLEAN ENERGY SOLUTIONS FOR THE FUTURE

California's energy policy goals are focused on emissions reductions to achieve climate stabilization. The long-term goal is total, economy-wide carbon neutrality by 2045. California's

¹ Executive Order B-55-18, available at:

goal for buildings is to reduce GHG emissions from the State's residential and commercial building stock by at least 40% by 2030.² The method to attain this goal is not, however, a mandated single solution, such as building electrification. To achieve our State's GHG emissions reduction goals, SoCalGas agrees with the many parties advocating that the Commission develop rules, policies, and procedures that consider a balanced, multifaceted approach that will ensure Californians have access to clean, safe, reliable, and affordable energy well beyond 2045.

Southwest Gas notes that "a balanced mix of energy solutions promotes energy certainty, innovation, leveraging of energy markets, and customer choice." The Coalition for Renewable Natural Gas (RNG Coalition) points out that "[Renewable Natural Gas (RNG)], by virtue of the fact that it can be stored over long time periods and dispatched, makes it a complementary and necessary resource, especially when paired with other forms of renewable power derived from intermittent resources. A truly diverse energy portfolio of decarbonization technologies should include and take advantage of the environmental and economic benefits associated with increased utilization of RNG." The California Public Advocates Office (Cal PA) agrees:

[A]nother pathway to achieve building decarbonization is through the expansion of the supply of renewable natural gas to meet part of building gas demand. Results from a study commissioned by the [California Energy Commission] CEC, *Deep Decarbonization in a High Renewables Future*, indicate that achieving a 100 percent zero-carbon generation mix is cost prohibitive without reliance on nuclear, carbon capture and sequestration (CCS), low cost abundant biofuels, or new forms of low-cost long duration energy storage.... Given the findings from these studies, the Public Advocates Office recommends that the Commission examine the potential of renewable gas as part of building decarbonization strategy to meet the State's GHG emissions reduction goals.⁵

In this proceeding, the Commission's primary objective must be to examine all options to achieve the State's climate goals and factor in other relevant priorities, including energy reliability and resiliency, affordability, and consumer choice.

https://www.gov.ca.gov/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf

https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB3232

- 2 -

² Assembly Bill 3232, available at:

³ Southwest Gas' Opening Comments at 5.

⁴ RNG Coalition's Opening Comments at 6.

⁵ Cal PA's Opening Comments at 12-13.

III. A DIVERSE PORTFOLIO OF SOLUTIONS BEST ACHIEVES SHORT- AND LONG-TERM CLIMATE GOALS

Southern California Edison (SCE) references their Clean Power and Electrification Pathway as a "blueprint for California to reduce GHG emissions" by electrifying roughly one-third of space-and water-heating in buildings by 2030.⁶ SoCalGas believes SCE's proposal jeopardizes reliability and resiliency, usurps customer choice, and imposes unnecessary costs.⁷ The Commission's goal in this proceeding should be to maintain an inclusive approach to lower the carbon intensity of buildings—one that is technology neutral, welcomes all ideas, considers all forms of energy, prioritizes the reliability and resiliency of California's energy portfolio, encourages and allows for current and future innovation, and factors in the cost and affordability of energy. This includes thinking more broadly about other forms of renewable energy, such as renewable gas (RG), which comprises renewable natural gas (RNG), syngas derived from the gasification of forest and agricultural waste, and hydrogen.

RG is a clear and practical choice to help California achieve the goals of Senate Bill (SB) 1383 because it addresses more than 80 percent of California's methane emissions, which come from agriculture, dairies, landfills and waste water. We can capture those emissions (preventing them from going into our atmosphere) and convert them to RG to heat our homes and cook our food. SoCalGas recently announced our vision to be the cleanest natural gas utility in North America. We are taking a bold step to help address fugitive methane emissions from the waste and agriculture sector by planning to replace 20 percent of our traditional natural gas supply with RNG by 2030. In order to leverage and increase the benefits of these efforts, the Commission should examine the potential of RNG as part of the building decarbonization strategy to meet the State's GHG emissions reduction goals. Switching out the fuel we use in buildings with a renewable option, rather than switching out infrastructure, results in less disruption to ratepayers and "assures Californians' access

⁶ SCE's Opening Comments at 6.

⁷ Additionally, electrification is not a solution to addressing other building emissions. As Energy Solutions noted in their opening comments, "The scope of building decarbonization should include the full set of building emissions that are feasible to account for" and that includes "all on-site fugitive emissions from refrigerants..." Energy Solutions' Opening Comments at 4.

⁸ See 2016 Methane Emissions, *California Greenhouse Gas Emission Inventory - 2018*, California Air Resources Board (CARB), *available at:* https://www.arb.ca.gov/cc/inventory/data/data.htm

⁹ See SoCalGas Announces Vision to Be Cleanest Natural Gas Utility in North America, SoCalGas (March 6, 2019), available at: https://www.socalgas.com/energy-vision

to safe and reliable utility infrastructure and services" in accordance with the Commission's mission. A number of other parties to this proceeding, including Cal PA, the California Hydrogen Business Council (CHBC), the Environmental Defense Fund (EDF), Pacific Gas and Electric Company (PG&E), and Southwest Gas, also support exploring the potential of renewable fuels like RNG or hydrogen to assist us in reducing our reliance on fossil-based natural gas and achieve the State's climate goals.

Consumers want choice. SoCalGas not only wants to preserve that choice, but also wants to offer their customers the option to purchase RNG as part of their natural gas service. SoCalGas agrees with EDF that the Commission should broadly consider how its building decarbonization efforts may coordinate with voluntary tariff offerings. In fact, SoCalGas has already sought authority to offer a voluntary RNG tariff to customers beginning in 2020. SoCalGas also agrees with EDF that building decarbonization through fuel substitution, such as the addition of RNG and hydrogen, should be explicitly included within the scope of this proceeding. Retaining existing gas equipment and replacing traditional gas with carbon-neutral renewable gas is a more cost-effective option in the long run for many customers and has the added benefit of not requiring any change on their part.

Additionally, SoCalGas supports the production and use of hydrogen in California. Hydrogen as an energy source has favorable emissions characteristics because it does not contain carbon or produce carbon dioxide (CO₂) when it is consumed. Hydrogen energy and storage technologies from renewable sources can play a critical role in supporting California's grid reliability and the integration of increasing levels of renewable energy onto the regional electric grid, thereby assisting to meet California's ambitious GHG emissions goals. Power-to-Gas (P2G) technology is a way to store energy through renewable hydrogen produced from renewable electricity using a process known as electrolysis. This green electrolytic hydrogen is a carbon-free

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¹⁰ See the CPUC Mission Statement, available at http://www.cpuc.ca.gov/general.aspx?id=1034

¹¹ Cal PA's Opening Comments at 2.

¹² CHBC's Opening Comments at 3-4.

¹³ EDF's Opening Comments at 13 ("The Commission should consider the role of biomethane, hydrogen, or other alternatives to fossil gas when electrification is not technically or economically feasible...") *Id*.

¹⁴ PG&E's Opening Comments at 8-10.

¹⁵ Southwest Gas' Opening Comments at 5.

¹⁶ Green Tariff Application (A).19-02-015.

¹⁷ EDF's Opening Comments at 4.

source of energy that can be used to decarbonize multiple sectors of the economy, including power generation, energy storage, transportation, and residential and commercial heating. P2G technology has the potential to address system reliability challenges that the California Independent System Operator (CAISO) faces with the large-scale integration of solar photovoltaic (PV) generation on the electric grid (also known as the "duck curve"). 18 The rapid rise of solar and wind generation has created challenges with managing the electric grid. Solar and wind production frequently exceeds electrical demand, and there is limited ability to store this surplus energy optimally.¹⁹ In the absence of a comprehensive energy storage solution, CAISO curtails these renewable sources, resulting in missed opportunities to utilize these valuable renewable energy resources. P2G prevents curtailment of high penetrations of variable renewable generation by making use of surplus renewable electricity, which otherwise would be wasted, by storing it for later use as needed in any of several applications. Battery technology offers storage solutions measured in hours, whereas hydrogen storage of electricity is measured in years. As California is faced with an increasingly urgent need to deploy utility-scale energy storage solutions to support intermittent renewable power generation, P2G must be evaluated rigorously for its potential to serve as a large-scale storage option and for its potential to help decarbonize the fuel we use in buildings via hydrogen-blending.

With the appropriate regulatory, technical and financial frameworks, California can scale up the production of RG to achieve the State's GHG emissions reduction goals. Just as government investment and financial incentives helped drive down the price of solar PV and wind generation, this proceeding could be a catalyst for stimulating investments in RG feedstocks and hydrogen production technologies which could drive down the costs of RG production.

As noted by RNG Coalition in opening comments, "[c]apture and conversion of methane from society's waste streams and redeeming it for productive end-use epitomizes sustainability."²⁰ Resource sufficiency is not an issue. According to a UC Davis research report, almost 100 billion cubic feet per year (Bcf/y) of anaerobically digested RNG is available in California today.²¹ If the

¹⁸ See Fast Facts: What the duck curve tells us about managing a green grid, California ISO, available at: https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables FastFacts.pdf

¹⁹ See *Impacts of Renewable Energy on Grid Operations*, California Independent System Operator (May 2017) at 1, *available at*: https://www.caiso.com/Documents/CurtailmentFastFacts.pdf

²⁰ RNG Coalition's Opening Comments at 7.

²¹ See *The Feasibility of Renewable Natural Gas as a Large-Scale, Low Carbon Substitute,* UC Davis Institute of Transportation Studies (June 2016) at ix, *available at*: https://steps.ucdavis.edu/wp-content/uploads/2017/05/2016-UCD-ITS-RR-16-20.pdf

State wants to consider gasification of dead trees and agricultural by-products, that in-state RNG availability assessment could increase by another 100 Bcf/y²² to 200 Bcf/y. If we consider out-ofstate supplies, there could be another 1 trillion cubic feet per year (Tcf/y) available.²³ With both instate and out-of-state supplies, gas corporations could achieve the projected statewide core procurement load of 540 Bcf by 2030;²⁴ this does not even count hydrogen produced from electrolysis, steam-methane reformation of biomethane, or traditional natural gas using carbon capture and utilization²⁵—all of which can help the State achieve carbon neutrality by 2045.

Utilization of these in-state and out-of-state RG feedstocks is the most practical way to help the State achieve its GHG emissions reduction goals and decarbonize the fuel we use in buildings. The Commission should consider developing policies in this OIR that will further advance the deployment and adoption of diverse renewable energy solutions that will continue to provide Californians reliable, resilient, and clean energy beyond 2045. The Commission's actions in this proceeding will influence the energy supply of the future; therefore, we ask the Commission to make sound, sensible decisions that would not break the promise of hydrogen as a fuel of the future and expand the use of RG to address methane emissions from the agriculture and waste sectors, and the 140 million dead trees in our forests.²⁶ As noted by the National Fuel Cell Research Center (NFCRC), "[t]he development of the renewable gas market is an important goal to enable the broadest future [for] building decarbonization, while addressing the limits of lithium-ion [i.e., battery] technology. The Guiding Principle of Market Transformation can only be achieved ultimately [by] investing in renewable gas sources."²⁷

²² See Philip Sheehy and Jeff Rosenfeld, *Design Principles for a Renewable Gas Standard*, ICF (2017) at 8, available at: https://www.icf.com/-/media/files/icf/whitepaper/2017/icf_whitepaper_design_principles.pdf ²³ *Id.* at 10.

²⁴ See 2018 California Gas Report, California Gas and Electric Utilities at 18, available at: https://www.socalgas.com/regulatory/documents/cgr/2018 California Gas Report.pdf (297 Bcf/y for SoCalGas and 243 Bcf/y for PG&E in 2030).

²⁵ See Next Generation Black Carbon Production, Monolith, available at: https://monolithmaterials.com/innovative-technology/

²⁶ See Umair Irfan, California Has 149 Million Dead Trees Ready to Ignite like a Matchbox, Vox (February 15, 2019), available at: https://www.vox.com/2019/2/13/18221822/california-149-milliondead-trees-wildfire

²⁷ NFCRC's Opening Comments at 10.

IV. MAXIMIZING BENEFITS FROM EXISTING INFRASTRUCTURE PROMOTES AFFORDABILITY

SoCalGas owns and operates an integrated gas transmission system consisting of pipeline and storage facilities. Using our network of transmission pipelines and four interconnected storage fields, we deliver natural gas to nearly 6 million residential and business customers. The gas transmission system extends from the Colorado River on the east of SoCalGas' approximately 20,000-square mile service territory to the Pacific Coast on the west, and from Tulare County to the north to the United States/Mexico border to the south, supporting over 21 million consumers in southern California. The existing natural gas transmission and distribution infrastructure can be used to transport RG safely and reliably. Leveraging current natural gas infrastructure has the added benefit of promoting economic development and energy reliability in California by supporting the development of new renewable energy sources.

Pursuing electrification-only policies could result in unintended economic consequences. If the amount of gas we deliver through our pipes declines, the fixed costs associated with maintaining and operating our system would be spread over fewer customers and could result in higher rates for customers who continue to use gas. This concern was raised by numerous parties in opening comments, including PG&E²⁸ and the Coalition of California Utility Employees (CUE).²⁹ CUE detailed some of the "unintended consequences," such as fewer gas customers paying for existing required infrastructure. CUE also notes two problems: (1) a "smaller pool of customers will have to foot the whole cost by paying more ... [which] will adversely impact millions of homes and businesses that depend on gas for space heating, water heating and cooking," and (2) "[t]he revenue won't be enough to cover the costs to pay workers to maintain the system." For this reason, CUE cautions that the Commission "must conduct a robust analysis of impacts from building decarbonization on existing natural gas infrastructure safety, maintenance and maintenance costs, energy reliability, impacts on rates, impacts of higher prices on consumers and industry, and impacts on workers." We concur with these parties on this point.

There may be other consequences to forcing a single solution, especially if it is not adopted by customers. For example, if new mandates are issued and natural gas-fueled appliances are no

²⁸ PG&E's Opening Comments at 9-10.

²⁹ CUE's Opening Comments at 2-5.

³⁰ *Id*. at 3.

³¹ *Id*. at 2.

longer available for purchase in California, customers could find simple workarounds, e.g., driving to a neighboring state or repairing the appliance so they can continue to use natural gas to cook their food and heat their home. Similarly, penalties for having natural gas appliances (either actual or *de facto* penalties by way of electric incentives) and limited natural gas distribution service could cause home value/pricing issues when two classes of homes are effectively created (i.e., those with gas, and those without). The State is readily aware of the difficulty in decommissioning or retiring energy assets (e.g., a single nuclear plant). The widescale decommissioning of all the natural gas assets (and their related in-home counterparts) could have an undiscernible effect. Even more, customers would have to pay to decommission a well-functioning, reliable, and affordable energy delivery system while also paying the additional electric transmission and distribution costs that building electrification will add to already-high electric rates.

The National Resources Defense Council (NRDC), Sierra Club, CHBC, and others express concern about stranded investments in the gas system and making unproductive investments that may not ultimately help the State meet its climate goals.³² However, their singular focus on electrification is a greater risk to the achievement of the State's climate goals because it fails to address crucial questions about energy storage and ignores the role existing assets can play in providing such storage while preserving reliability, resiliency, affordability, and consumer choice.

Ultimately the Commission is tasked with exploring all strategies that support a cost-effective, equitable and viable clean energy future. The Commission should adopt policies that protect customers, not burden them. The question of who should pay for "stranded" gas assets can be avoided by shifting our mindset to consider ways we can continue to utilize the existing pipeline system to deliver renewable energy (such as RG). This is a proposal the Commission must explore in this proceeding.

V. SUSTAINABILITY REQUIRES CONSUMER ADOPTION, WHICH IN TURN REOUIRES CHOICE AND AFFORDABILITY

Without consumer adoption, building decarbonization policies cannot succeed. Homeowners, apartment owners and developers are crucial to a successful program focused on reducing GHG emissions from residential buildings. The Commission should give serious consideration to both the direct and indirect effects of its new policies on the single largest investment people will make over their lifetime (i.e., their home). Customers should have cost-effective options and must be able to

³² NRDC/Sierra Club's Opening Comments at 4-5 and CHBC's Opening Comments at 7.

choose which technologies or fuels provide the best solutions for their family. Southwest Gas correctly notes the importance that "solutions ultimately adopted to help accomplish the State's goals toward carbon neutrality are effective, adoptable, scalable, and affordable, while also promoting and maintaining energy reliability, resiliency and consumer choice." The Wild Tree Foundation correctly points out that California "emits only a small fraction of global GHG emissions;" thus, for a building decarbonization program to be meaningful, it must be a model that can be exported and "replicated around the country and the world." The Association of Bay Area Governments on behalf of BayREN agrees: "New technologies should be evaluated based on their ability to maximize reductions in greenhouse gas emissions and the scalability of the technology." The Association of the technology is the technology.

Palo Alto's heat pump incentive program is a good example of how difficult it can be to get people to adopt new technologies. The City of Palo Alto "has offered a rebate of up to \$1500 per heat pump water heater since mid-2016. Since the program launch, the uptake rate of this rebate is at about 0.1 % per year among single family homes." Even a city with one of the highest median home-sale prices in the nation and home to a large number of forward-thinking technology companies, including Hewlett Packard, Tesla, Apple, Facebook and PayPal, has been challenged by consumer adoption. If the City of Palo Alto had instead used this incentive money on RNG, they could have decarbonized 3,750 homes for one year. The point is simple: there is more than one way to achieve building decarbonization. Several commenting parties note the pitfalls of complex regulatory schemes and subsidizing markets, but these characterizations do not make sense. 37

RG not only can be a carbon negative fuel; it also has the distinct advantage of providing climate stabilization benefits without requiring consumer adoption of new appliances or costly home conversions. Consumers can keep their appliances of choice and would not be forced to adopt technologies that are not sensible for their homes or families. Building decarbonization using RG is a win-win for both homeowners and the State. As one party notes in comments, "[i]f RNG and other viable technologies are provided a level playing field on which to participate and compete, the

³³ Southwest Gas' Opening Comments at 2.

³⁴ Wild Tree's Opening Comments at 3.

³⁵ BayREN's Opening Comments at 6 [emphasis added].

³⁶ City of Palo Alto's Opening Comments at 4.

³⁷ CHBC's Opening Comments at 3.

overarching program will minimize consumer costs and ensure the most optimal path toward achieving the State's greenhouse gas reduction goals."38

Several other parties recognize the vital role cost and affordability play in sustainability and fairness. The County of Los Angeles, on behalf of the Southern California Regional Energy Network (SoCalREN), explains that another guiding principle in this case should include "cost impacts" for any new rules or policies that may significantly impact customers within disadvantaged communities or low-to-moderate income households.³⁹ SoCalREN emphasizes the need to be mindful of "any undue cost burdens that these new policies, rules and procedures may place among those most underserved."⁴⁰ The California Housing Partnership points out that "[a]ffordable housing property owners also have limited resources available at their disposal to install measures that don't bring in high savings."41

Another critical component to sustainability is that the solutions reached in this proceeding must guarantee resiliency and reliability because energy is required every minute of every day. Reliability and resiliency must not be compromised in State energy planning efforts. The NFCRC notes that "[r]esiliency and reliability should be simultaneously achieved by introducing new technologies for building decarbonization."⁴² Citing the 2019 IEPR Update Scoping Order, NFCRC notes there are "differing vulnerabilities to the natural gas and electricity sectors" and "flexible and adaptive strategies to increase the state's resilience to multiple stressors from climate change on the energy system, with particular attention to vulnerable populations."43

VI. DIFFERENT PROGRAM ADMINISTRATORS ARE REQUIRED FOR DIFFERENT **PROGRAMS**

Multiple parties offer suggestions for third-party administrators, and SCE suggests that an electric IOU would be appropriate. As part of its evaluation, the Commission should take into consideration the success and/or failures of the numerous programs and/or projects managed by different entities. The primary focus on selecting the appropriate program administrator should be to safeguard ratepayer investments and ensure programs are designed, implemented, and administered

³⁸ RNG Coalition's Opening Comments at 8 [emphasis added].

³⁹ SoCalREN's Opening Comments at 2.

⁴¹ California Housing Partnership's Opening Comments at 6.

⁴² NFCRC's Opening Comments at 9.

⁴³ Id. at 9-10, citing 2019 Draft Scoping Order for the 2019 Integrated Energy Policy Report, California Energy Commission, (February 14, 2019) at 4.

to the best interest of ratepayers and the State's climate goals. At minimum, the program administrator should be a reputable entity subject to the CPUC's Rules of Practice and Procedure.

SoCalGas believes the BUILD program is best suited to be administered locally, while the TECH program may benefit from a single statewide administrator. Home builders and developers, who are the intended recipients of the incentives provided by the BUILD program, largely operate on a regional basis, which enables coordination with municipal planning departments, local utilities, and local agencies. They also are adept at working with utility planning departments for meter sets and line extensions as well as energy efficiency programs which promote more efficient home design and zero net energy buildings. For the BUILD program to be successful, it must leverage existing utility energy efficiency programs at the local level to magnify the available incentives and amplify the energy savings and emissions reductions.

The TECH program has a different target, primarily the identification of barriers for high-efficient technology adoption and working with manufacturers and retailers to overcome these barriers. This program may be more suitable as a statewide approach; however, coordination with local utility energy efficiency programs will still be critical for successful implementation of the program. In this regard, SoCalGas agrees with Southwest Gas that the individual utilities are best positioned to administer the BUILD and TECH programs prescribed in SB1477. Southwest Gas notes that it is most familiar with its customers, procedures and existing programs, and is best situated to administer the new programs most effectively within its own service territory. The same holds true for SoCalGas and the other funding gas corporations.

Cal PA errs in its assessment of the intent of the SB1477 program. Cal PA states that "[t]he programs should not be administered by a gas corporation because of the inherent conflicts of interest in programs designed to switch customers away from using natural gas." This assumes SB1477 is about switching customers away from natural gas, which it is not. The intent of SB1477 is to focus on incentivizing technologies that are more efficient than those that are currently contained in Title 24, Part 6 building efficiency standards. This includes gas, electricity, propane, and other fuels. The narrow view that this is a program intended to switch building technologies from natural gas to electric is not only incorrect, but such a singular view could prevent California from achieving its emissions reduction goals. Instead, the Commission should look to implement a fuel-neutral program that focuses on multiple energy sources and technologies covered by the legislation to improve energy efficiency and reduce GHG emissions. Other parties have the right

approach. The California Municipal Utilities Association (CMUA) requests that "the Commission promote a broad and inclusive approach to evaluating technology opportunities." Only a broad approach will establish a framework by which California will achieve its ambitious goals in a thoughtful and cost-effective manner. Furthermore, the Commission should be mindful of the source of these funds, namely natural gas ratepayers, and pursue a program that conforms to the long-standing practice that gas ratepayers receive the benefits of the programs they are funding.

Cal PA's contention regarding a conflict of interest is an unsupported generalization. SoCalGas supports California's efforts to decarbonize its energy system. This should be done in a thoughtful, cost-effective manner that provides all Californians an energy system that is resilient, reliable, and provides affordable energy options for customers. Cal PA seems to presume that an electric utility would have no conflict of interest in this matter; however, an electric utility could utilize Cal PA's narrow view of SB1477 as an opportunity to build electric load, not taking into account overall GHG reductions, nor mindful of the ramifications of increased energy costs for customers, nor considering the potential negative consequences of an energy system that lacks resiliency.

SCE appropriately acknowledges the \$200 million allocated to the BUILD and TECH programs over the implementation period is a first step in the funding needed to improve California's clean energy infrastructure. While SCE notes its accomplishments in its opening comments on successfully running Commission-approved programs, SoCalGas has implemented programs through partnerships that have been critical to their success. The ability to partner with stakeholders, local governments, electric utilities, water agencies, air quality districts, and numerous other entities will increase the likelihood of the success of these programs. As noted in opening comments, SoCalGas has been nationally recognized for its ability to bring together like-minded partners to leverage additional funding and magnify the effects of incentive programs and services for customers. The Commission will need that ability to ensure success in these programs. The Commission can rely on SoCalGas' commitment to bringing these full resources to bear in this effort.

⁴⁴ CMUA's Opening Comments at 2.

VII. FUEL AND TECHNOLOGY NEUTRALITY IS CRITICAL FOR CALIFORNIA'S ENERGY POLICY

SoCalGas agrees with EDF that the Commission should broadly consider how its building decarbonization efforts may coordinate with voluntary tariff offerings. SoCalGas has already sought authority to offer a voluntary RNG tariff to customers beginning in 2020.⁴⁵ SoCalGas also agrees with EDF that building decarbonization through fuel substitution, such as the addition of RG, should be explicitly included within the scope of this proceeding⁴⁶ because retaining existing gas equipment and replacing traditional gas with carbon-neutral renewable gas is a more cost-effective option in the long run for many customers and has the added benefit of not requiring any change on their part.

Other parties also recognize the importance of a technology-neutral approach. The NFCRC notes that "[1]imiting the program focus only on certain technologies could limit program effectiveness in reducing GHG emissions." NFCRC cites research by the University of California, Irvine that electric heat pumps may actually *increase* GHG emissions. Along the same lines, SoCalGas agrees with NFCRC's point that "[f]uel cells decarbonize buildings and do so while providing always-on reliable power," which is critical for vital industries like healthcare providers, data centers, and advanced manufacturing. Comments provided by the California Efficiency and Demand Management Council (Council) note the goal of this proceeding should be to "lay the groundwork for a thriving marketplace of new technologies, appliances, and strategies that industry can implement to achieve the Commission's and state's long-term [] emissions goals." So

VIII. OTHER CONSIDERATIONS

A. The cost to ratepayers matters and must guide the Commission in this proceeding

While the BayREN advocates that metrics should diminish the importance of costs and instead focus on GHG reduction potential,⁵¹ this is not a fair proposal for many Californians. Over a third of SoCalGas' customers qualify for California Alternate Rates for Energy (CARE), which provides a 20% rate discount for eligible customers. For these customers, cost matters and the Commission must ensure customers have carbon-neutral options that do not require appliance

⁴⁵ Green Tariff Application A.19-02-015.

⁴⁶ EDF's Opening Comments at 4.

⁴⁷ NFCRC's Opening Comments at 4.

⁴⁸ *Id*.

⁴⁹ *Id.* at 7.

⁵⁰ Council's Opening Comments at 7.

⁵¹ BayREN's Opening Comments at 6-8.

replacement and expensive panel and wiring upgrades. In the case of renters or non-owners who also pay utility bills, the Commission must carefully consider the consequences of policies that involve, either directly or indirectly, the transfer of funds from one customer group to another that could result in disproportionate economic impacts.

NFCRC explicitly notes, and it is self-evident, that "[d]ecarbonization is not synonymous with electrification." Nevertheless, some parties focus on electrification as the exclusive method for decarbonization without even acknowledging the important role carbon-neutral RG can play in decarbonizing buildings. Similarly, while some parties discuss the importance of prioritizing incentives for low-income and disadvantaged communities, they do not address the issue of unintended consequences from an equity, jobs, consumer prices and energy affordability perspective. CUE's comments address this issue in a manner that the Commission should carefully consider in order to avoid negative impacts on housing costs and jobs: decarbonization policies should not replace good middle-class jobs with poverty-wage, dead-end jobs.⁵³

SoCalGas agrees with NRDC and Sierra Club that, as a guiding principle to ensure fair competition among technologies, strategies should be identified in this proceeding that will *most economically* reduce GHG emissions in line with the statewide goal of achieving carbon neutrality by 2045. This includes the need for large amounts of electricity storage in a renewable electricity scenario and the singular role that the natural gas pipeline system can play in providing long-term storage at the terra-watt level. The existing gas infrastructure, in which we have already invested significant resources, is a great resource for fully realizing renewable and carbon-neutral energy initiatives. The current system can transmit and distribute RG without costly upgrades.

B. Despite some parties' statements, there is no current consensus on how to solve GHG in California

In opening comments, NRDC and Sierra Club reference the CEC's 2018 Integrated Energy Policy Report (IEPR) Update, which identifies building decarbonization as the next clean energy policy priority for California to achieve its climate goals. NRDC and Sierra Club note "[t]he IEPR concludes that due to the availability of 'off-the-shelf, highly efficient electric technologies (such as heat pumps) and the continued reduction of emission intensities in the electricity sector,' there is 'a

⁵² NFCRC's Opening Comments at 6.

⁵³ CUE's Opening Comments at 5.

growing consensus that building electrification is the most viable and predictable path to zero-emission buildings.""⁵⁴ SoCalGas respectfully disagrees. It is unclear how "consensus" has been measured and, moreover, it is inconsistent with feedback received from natural gas-users.⁵⁵ The Commission should not be swayed by the broad recommendation made by the CEC and should make policy decisions that are based on science and are analyzed and vetted for cost and economic impact before they are adopted.

IX. CONCLUSION

SoCalGas encourages the Commission to explore all options to achieve the State's climate change goals while prioritizing the reliability and resiliency of our energy, affordability, and consumer choice. The policies determined in this proceeding will likely create a blueprint for California's energy future and influence GHG emissions reduction policies adopted across the country and around the world; thus, every viable option must be examined before determining the best path forward. We look forward to participating in this proceeding.

Respectfully submitted on behalf of SoCalGas,

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⁵⁴ NRDC/Sierra Club's Opening Comments at 2.

⁵⁵ See CBIA Announces Findings on High Cost of Electrifying Homes and Californians Preference for Natural Gas, Press Release, California Building Industry Association, (April 23, 2018) available at: http://www.biabuild.com/latest-news/2018/4/24/cbia-announces-findings-on-high-cost-of-electrifying-homes-and-californians-preference-for-natural-gas